

# CREATION

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## Brainy creatures

Ranking not very high at all in terms of their cuddliness or familiarity to the general public, are slime-moulds. These strange creatures are actually not moulds but protists - single-celled organisms that pulsate continually as they move around in search of their prey of yeast, bacteria and fungi.

But protists have no brain or centralised nervous system, so how do they decide where to go to locate their prey? This question has been addressed by a research group in Australia who have been studying the behaviour of a bright yellow slime-mould called *Physarum polycephalum*.

According to a report on the BBC News website (<http://goo.gl/9Mknd>, accessed 10th October) the researchers tested the navigational abilities of the slime-mould in an experiment more commonly used to analyse the artificial intelligence of robots. They placed a slime-mould on one side of a petri dish of agar gel, and a sugary substance attractive to the slime-mould on the opposite side. In between was a U-shaped “maze”. Remarkably, 96% of the slime-moulds tested found their way to the sugary substance.

So how did they do it? Slime-moulds are made up of bits of pulsating tissue that change the speed of their pulsations according to what is detected in the immediate environment. Pulsating parts are also affected by neighbouring pulsating parts within the cell, meaning that some internal communication is going on. Furthermore, the researchers discovered that the slime-mould, which leaves a trail of slime wherever it goes, does not revisit areas where its slime is already present.

This has led the researchers to a profound conclusion: the slime-mould has in effect an external “memory”. As the article quotes, “In essence, the slime-mould is



*Fuligo septica*, another brightly coloured slime-mould from Australia. Image: KeresH, Wikipedia, under Creative Commons Attribution-Share Alike 3.0 Unported licence.

memorising where it has been - storing this memory in the external environment and recalling the information when it later touches the slime-coated area”.

This raises some very interesting questions: How does the slime-mould know what value or interpretation to give to the cues it receives from its immediate environment and from the communications it receives from adjacent pulsations? Impressions are one thing, but the meaning of the impressions is quite another. And how does it know that the correct response to perception of its own previously laid-down trail is not to go there again? This suggests some application of meaning from an external intelligent source. What could that source possibly be, but an extremely intelligent Person?

From time to time we have also commented on the developing science of bio-mimetics, where scientists look to the natural world to find inspiration to solve engineering problems and so on. Recently the BBC News website reported on another fascinating example (<http://goo.gl/huQ04>, accessed 08 October), in which a team of scientists from the Universities of Sheffield and Sussex is endeavoring to create models of the neural systems in a bee's brain that helps it make sense of what it sees and smells.

The article reports, “Dr James Marshall, a computer scientist at the University of Sheffield co-ordinating the project, said simulating a brain was one of the "major challenges" of artificial intelligence. Before now, many of the attempts to recreate biological brains in silicon have focused on the cognitive systems found in humans, monkeys and mice. But, he said, simpler organisms such as social insects

have surprisingly advanced cognitive abilities”.

The team will run models of the sensory systems on a cluster of powerful graphics cards that can carry out the calculations needed to simulate bee brains. Apparently many scientists are starting to use graphics cards as number-crunching engines in preference to traditional supercomputers as they are cheaper and easier to use. The research team hopes the simulated bee brain can be used in the production of a robot that can make decisions about what it senses rather than just carry out pre-programmed tasks.



It takes a sophisticated sensory system to make sense of sights and smells, navigate to their source and return to the hive successfully. This speaks of intelligent design. Image: Michaela Kobayakov, [www.rgbstock.com](http://www.rgbstock.com).

So let's just run through that again: simulating a brain is a "major challenge" even for teams of highly intelligent scientists, including experts on artificial intelligence, who are devoted to the task; these social insects have "surprisingly advanced cognitive abilities"; and yet these bees are supposed to have developed purely by chance, through the random events of evolution?? As a number-crunching scientist might say, "something just doesn't add up".

## Cuttings & Comments from **New Scientist** *by Dr David Rosevear*

### **14 July p.6 – New particle, new questions**

There is great euphoria (p.3) among scientists at the Large Hadron Collider at CERN, Switzerland. They have detected particles resembling the long-sought Higgs boson which should complete the 'standard model', being the particle that gives mass to everything.

**"Joe Incandela of CMS and Fabiola Goanotti of ATLAS both reported seeing excesses of particles that fit the profile of a Higgs, with masses of 125 and 126 gigaelectronvolts (GeV) respectively (in particle physics energy and mass are interchangeable)." What they have observed have been the particles formed by the collision of the newly found particle with protons fired at it at high speed. "Although spotted at last, many properties of the new particle – thought to be the Higgs boson, or at least something similar – have yet to be tested... So it is possible the new particle is something much more exotic, such as a member of a more complete model of**

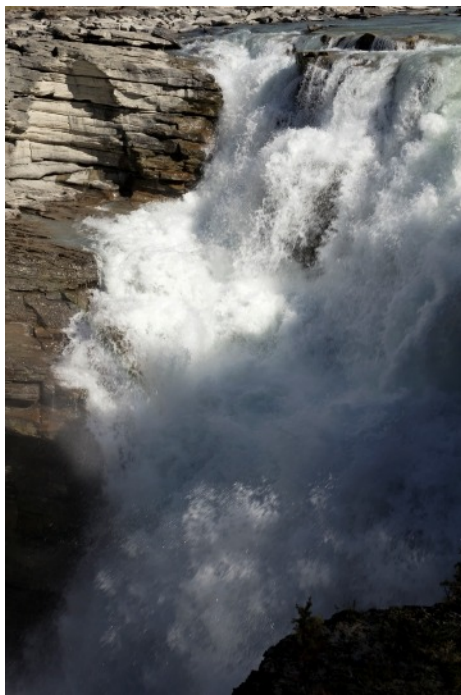
**the universe that includes the mysterious entities of dark matter and gravity.**

**"It is clear that the standard model is inadequate, not least because it can't explain 80 per cent of the matter in our galaxy – dark matter – and makes no mention of gravity."**

Of course, if the universe is not the result of an uncaused big bang some 13.6 billion years ago, but rather was created only thousands of years ago by the God by whom all things, visible and invisible, consist (Col. 1: 16-17), we can forget dark matter and dark energy.

### **21 July p.17 – Water hitched to Earth on asteroids**

Earth has an abundance of water, unlike most places in the Solar System. It is



Unlike any other planet in the solar system, earth has an abundance of water, essential for life - anyone would think the planet was designed.  
Image: CSM.

necessary to support life. So where did it all come from? Arguing from the proportion of heavy hydrogen, deuterium, in water from comets and meteorites, an American researcher concluded: **“Water and other volatile elements arrived on Earth via meteorites called carbonaceous chondrites... the exact birthplace of the carbonaceous chondrites is far from certain...”** With all those oceans and seas, there must be a lot of carbonaceous chondrites somewhere. But why should they all make for Earth?

Genesis 1 offers a simpler explanation: that in the beginning God created the heaven and the earth, that darkness was upon the face of the deep and that the Spirit of God moved upon the face of the waters.

#### **21 July p.28 – Why it’s nice to be right sometimes**

Following the recent discovery of a high energy particle that could be the elusive Higgs boson, it is not surprising that some articles, letters and comments today focus on this. Here we have an interview with Peter Higgs, who had proposed the particle 48 years ago.

**“I don’t call it ‘the God particle’. I hope that phrase won’t be used as much. I keep telling people that it’s someone else’s joke, not mine...it has connotations that are misleading. It causes some people who don’t know how the phrase arose to say foolish things. I’ve heard some with a background in theology try to make sense of it in terms of that. They don’t understand it was a joke and wasn’t meant to be taken seriously.”**

#### **28 July p.5 – Dark matter WIMPs out**

**“The stuff making up 80 per cent of the universe’s matter stubbornly refuses to come out of the shadows. The latest**

**results from the underground Xenon100 detector in L’Aquila, Italy, show no sign of WIMPs, the particle thought to make up the invisible stuff.”**

#### **28 July p.10 – Bearing climate change for millions of years**

The lengthy time estimate is arrived at by comparing genomes from living polar bears with a **“110,000-year-old polar bear jawbone”** and with DNA from black and brown bears. This date is probably guessed at from the sediment in which the jawbone was buried, so involves big assumptions.

Regarding the hundreds of millions of years in the past when the polar bears are said to have evolved, an expert opines **“It’s a good new educated guess based on a lot of exciting data, but the actual numbers and assumptions on which the earlier split rely remain open to debate.”** You bet!

With rising temperatures and loss of sea ice, polar bears have been observed interbreeding with brown bears. **“Analysis reveals that polar bear DNA has lost diversity as populations have dwindled, drifted apart and become genetically isolated, suggesting today’s bears have less resilience to the environmental change, habitat loss, pollution and diseases they now face.”**

The different bear types are, of course, variations within a created kind, capable of interbreeding. It is no more evolution than it is so in different colours of humans. Moreover, loss of genes over time is the opposite of supposed evolution. [See the book *‘Genetic Entropy & the mystery of the genome’* by Dr John Sanford, at [www.csm.org.uk/shop.](http://www.csm.org.uk/shop.)]



**28 July p.14 – Neanderthals had herbal know-how**

**“Call it the Neanderthal health service. Chemicals trapped in the tartar of Neanderthal teeth show they ate bitter-tasting plants with medicinal properties. The find is the earliest direct evidence of self-medication in prehistoric times... One ate yarrow, an astringent, and camomile, an anti-inflammatory. It’s very surprising that the plants we were able to securely identify were those with a bitter taste and no nutritional qualities – but known medicinal properties.”**

Clearly, Neanderthals were not pre-humans, but sons of Eve living during the ice-age following the flood of Noah.

**28 July p.32 – One and only you**

Illustrated by a pair of ‘identical twins’, this interesting article shows many of the ways in which we are all 7 billion of us unique.

Our DNA can vary by up to 0.5 per cent, but with 3.2 billion letters of the DNA code, this small proportion adds up to a variation of 16 million letters. **“The code has four letters, so the number of possible combinations is four raised to the power of 16 million – an absolutely vast number of possible human genomes...”**

**“Everyone knows that fingerprints are unique, so it might come as no surprise that their size and shape is largely determined by genes.**

**“Faces are our most obvious badge of identity, but... there are plenty of doppelgängers...”**

Gait – we all walk in a slightly different style, and can be recognised by our gait.

Ears are all unique.

Iris recognition can be used to verify who we are, and one’s voice is fairly distinct, though we can deliberately alter it (impressionists make a living by this skill).

It depends on the shapes of larynx, mouth, nose, palate, tongue, lips and cheeks.

As our dogs are aware, we all carry different scents made up of a cocktail of at least a couple of dozen odorants composed of nearly 5,000 acids, alcohols, ketones and aldehydes. Think socks! Some 100 trillion bacteria live on and in us, adding to the cocktail.

Heartbeat and brainwaves differ from person to person; no two heartbeats are exactly the same.

The amazing thing is that our Creator knows us individually, and has said ‘I am the Good Shepherd and know my sheep and am known of mine’. [John 10]



Beautifully designed for hearing and balance, yet specific to the individual, ears are just two of the many features that make you uniquely you.  
Image: [www.sxc.hu](http://www.sxc.hu).



Representation of Mars. One of our nearest neighbouring planets, yet very different from our own - so maybe they were individually designed? Image: CSM.

#### **4 August p.6 – Many roads to the Red Planet**

**“Scheduled to touch down on the Red Planet on 5<sup>th</sup> August via a nail-bitingly intricate autonomous procedure [which it did successfully], NASA’s Curiosity rover will undertake an unprecedented two-year hunt for signs of alien life.”**

I guess someone realised that failure to find signs of life would cast doubt on the idea that life could evolve from non-living chemicals. Hence, a TV news item on the 5<sup>th</sup> modestly claimed that Curiosity was not looking for signs of simple life forms, nor even for signs of past life, but only for evidence that past conditions were capable of supporting living cells. Today Mars is barren, as reported by previous probes.

**“Costing \$2.5 billion, Curiosity – known formally as the Mars Science Laboratory (MSL) – is the biggest, boldest, most expensive Mars mission ever attempted.”**

The European Space agency with the Russian Federal Space Agency is due to

launch a rover, ExoMars, in 2018 that **“will drill 2 metres into the surface to see if life could have had a toehold on Mars up to 3 billion years ago”**. (How they arrive at that date isn’t disclosed.)

BTW, on Tuesday 7<sup>th</sup> August the death was announced at the age of 98 of Sir Bernard Lovell, pioneer of the Jodrell Bank space telescope. The BBC news item said that he remained a Christian believer despite his scientific studies! They quoted him as having said that a decade ago we were sure we understood the universe, but today we realise we know almost nothing. (Subsequent BBC news bulletins omitted reference to his faith and of now knowing almost nothing.) Your reviewer’s interest is heightened by the fact that Sir Bernard went to his old school at Kingswood Grammar.

#### **4 August –Instant Expert 25 – Fossils**

This 8 page insert is by Pat Shipman, a palaeo-anthropologist, and offers the standard view of fossil succession and dating, namely that fossils are found where they lived and evolved, rather than where they were buried catastrophically. She tells us that the earliest (or if you prefer, the ones that were buried first in the lowest sedimentary layers) were soft-bodied, their petrification something of a puzzle. They occur world-wide, and are named after the Ediacaran Hills in Australia. **“What is indisputable is that they were highly complex, multicelled creatures.”** For this reason they are thought to be the distant descendants of much earlier, simpler creatures too primitive to have been fossilised.

**“The strange world of the Ediacarans was followed by something even more bizarre. About 505 million years ago there was an explosion of biological**



Typical of the so-called Cambrian period are trilobites, such as this example from Field, Canada. Practically complete and flattened, the fossil speaks of a creature that was buried very rapidly by a huge quantity of sediment. Image: CSM

**diversity called the Cambrian...Exactly how they were preserved is a mystery. All the fossils are flattened and some seem to have been broken up by churning of the sediments."**

The fine grained rocks of Messel and Solnhofen in Germany preserve exquisite details of their varied fossils. These include fish, snakes, turtles, lizards, crocodiles and alligators, birds, horses, carnivorous animals and an extinct lemur-like primate. There are also dragonflies, beetles and jellyfish.

Shipman suggests that their habitat included a lake whose sediments, when

disturbed, belched out poisonous gases that asphyxiated the nearby fauna. Being devoid of bacteria, the lake allowed the creatures to be fossilised rather than to simply decay. Just So!

In truth, such a mixture of marine and terrestrial animals must have been swept away by a worldwide flood and buried so rapidly that they were preserved in the fine-grained sediment.

The **"oldest feathered dinosaur"**, called *Anchiornis*, could not have flown because its wings were not large enough. **"These fossils have forced us to consider that feathers evolved for a function other than flight."** Yet display and insulation do not require the intricate design of barbs and barbules that give an air-tight aerofoil necessary for flight. An accompanying picture shows a fossil with **"insulating fluff"**, not at all like feathers.

A 2010 study of the genomes of 3 Neanderthals led to the conclusion that these humans interbred with *Homo sapiens*. I guess they all derived from Eve, the mother of all living.

Some ancient remains belie the dates attributed to fossils. Mary Schweitzer's team extracted soft tissue such as red blood cells from dinosaur fossils. These are not mentioned here.

#### **11 August p.5 – Historic ice loss**

**"The dramatic ice loss from Greenland between 2005 and 2010 drove up sea levels around the world – but it was not unprecedented."**

Satellite monitoring goes back just 20 years, but researchers from the University of Copenhagen have shown from aerial photographs that similar melting took place between 1985 and 1993 and in the 1930s.

**"He says that surges of ice loss may be a regular occurrence."**



Recent surges of ice loss in Greenland are causing concern - but is it a regular occurrence? Image in the public domain.

**fluid. The finding may provide fresh insight into disorders like Alzheimer's, in which waste products accumulate in the brain."**

Without this continuous washing with cerebral spinal fluid, waste products would build up in our brains leading to deterioration in function. Even mouse brains need this system. A less than fully-functioning system would be useless, because a partially evolved drain couldn't work, and would decompose with time.

#### **18 August p.4 – Record heat at LHC**

If the universe had started with the proposed Big Bang, where nothing exploded into everything, there would have had to have been a phase change when the high energy plasma of quarks and whatnots condensed to produce the protons and neutrons that today are the constituents of atoms. In order to look into this, the Large Hadron Collider has been smashing lead atoms together. This has made a quark-gluon plasma reaching over 5 trillion °C, the hottest temperature ever created in an experiment. It was reported that **"We are looking further back into the universe than ever before"**.

The experiment is interesting, but has nothing to do with how the Creator made the universe.

#### **18 August p.5 – Brain's drain**

The more we research, the more amazingly intricate the world is found to be.

**"A waste-removal network similar to the lymphatic system has been discovered in mouse brains. The glymphatic system cleanses the brain with cerebral spinal**

#### **25 August p.6 – The spirals that don't make sense**

A software program has studied the direction of spin of spiral galaxies along two axes at right angles to each other. Looking at a quarter of a million galaxies, observers found to their surprise a preponderance of left-handed spins. The universe seems to have a net angular momentum. **"Since angular momentum can neither be created nor destroyed, the universe must have come into existence in a spin...Amino acids are more often left-handed than right, while all subatomic neutrinos that have been observed have a left-handed spin."** A planned survey will look at 10 billion or so galaxies.

Then again, the universe may have been designed with a spin to provide dynamic stability.

#### **25 August p.8 – DNA smashes its own data-storage records**

**"In theory, DNA can encode...roughly the capacity of 100 billion DVDs – per gram of single-stranded DNA, making it**



five or six orders of magnitude denser than currently available digital media, such as flash memory. Information stored in DNA can also be read thousands of years after it was first laid down.” That’s *orders* of magnitude!

Both complex chemistry and information require a Designer.

### 25 August p.34 – Rooted in sensation

This 4-page cover story provides yet more evidence that the world was designed by a Creator rather than gradually perfecting itself by nature selecting from chance changes.

It is found that plants, like animals, can see, touch, smell, taste and hear.

We reported on similar research findings from *New Scientist* 28 September, 1998, and included it in my book *Has Darwin had his Day?* pages 91-93.

Sight. Plants have photoreceptors throughout their stems and leaves that allow them to react to light, its direction, intensity and colour. Photosynthesis turns atmospheric CO<sub>2</sub> into sugar, starch and cellulose using sunlight. Plants use a hormone, auxin, to bend towards the light. Red or blue light prompts plants to shut down for the night or waken after dawn as by an alarm clock!

Touch. “Plants live in a very tactile world.

**Branches sway in the wind, insects crawl across leaves, and vines search out supports to hang on to.”** They respond to heat and cold. Shaking a plant will reduce its growth. Windswept plants are stunted. The carnivorous Venus flytrap is a spectacular example of touch sensitivity.

**“What’s really fascinating is that even at the level of individual cells, plants and animals use similar proteins to feel things.”** Of course, proteins can’t make themselves. They need both a selection of other proteins and specific information carried in coded DNA and RNA.



The Venus flytrap is alerted to the presence of its prey through touch-sensitive hairs. Image: K. Szkurlatowski, [www.rgbstock.com](http://www.rgbstock.com)

Smell. Plants have receptors to smell volatile odours. Ripening fruit gives off ethylene gas, so that placing a ripe fruit among unripe ones promotes ripening. So an orchard brings all its bounty to harvest at the same time, attracting animals to eat the fruit and disperse the seeds. Leaf colour changes are also coordinated by ethylene.

Trees attacked by caterpillars send an airborne pheromone message to nearby trees. These trees then produce an unpalatable chemical in their leaves to discourage the pests.

Taste. While smell deals with volatile chemicals, taste deals with soluble ones. Methyl jasmonate, a constituent of the perfume Chanel no. 5, diffuses through the pores of leaves and is converted into the water-soluble jasmonic acid. This triggers the plants defence responses. Plant roots

can also communicate with neighbours using water-soluble messengers.

Hearing. Is talking to your house-plants a recipe for better growth? Probably not, though the disciples did pluck ‘ears’ of corn (☺). (A letter – 22/9/12 p.28 – in response to this article reported that striking a middle C tuning fork caused a flower to shed its pollen.) The human voice has been used to double the growth of dwarf sweet peas by stimulating the production of the growth hormone gibberellic acid. I was a research chemist with ICI half a century ago, and we studied the complex structures of the gibberellins. But we didn’t attempt to synthesise them. We extracted tiny quantities of them from sacks of coconuts. No way might they arise by naturally selected chance developments.

Seeds. Plants also have a varied repertoire of tricks for dispersing their seeds away from the parent plant. These include wind with sycamore and dandelion, birds eating tasty fruit with berries and bees collecting honey. Could these mechanisms have evolved over time? No way! They had to be fully ready from the start or there wouldn’t have been a second generation.

### 1 September p.38 – Shaping life

**“It starts with a single cell. From this can come a dizzying variety of shapes and forms, from trees to jellyfish to people. We take this process so much for granted that we forget how extraordinary it is.”**

While we have found which genes direct growth we know very little of how their instructions lead to final shape. We now know that plant growth is triggered by high levels of auxin, a plant hormone. (Readers of this column may remember that it is the build-up and removal of auxin in the stems of sunflowers that make them bend to follow the sun through the day and return to face East again at night.) So how does



This “simple” jellyfish is actually a highly complex multi-cellular organism derived from the enormously sophisticated growth and development of a single cell following the encyclopaedic instructions of its DNA. Just by chance? Image: K. Szkurlatowski, [www.rgbstock.com](http://www.rgbstock.com)

the auxin know where to site itself? A protein called PIN<sub>1</sub> pumps auxin out of cells. The use of fluorescent labels on the PIN<sub>1</sub> proteins in thale cress revealed that they congregated in spots at the end of cells where leaves later emerged. **“Their studies and models show that simple feedback loops, involving the funnelling of auxin by PIN<sub>1</sub>, can produce alternating peaks of auxin and the growth suppressor along the margin of a leaf, and thus a serrated shape.”**

Growth hormones, suppressors and protein pumps are produced from the precise order of nucleotides in the genes, in concert with other proteins and RNA. Their complexity is irreducible. Since all this points inevitably to an intelligent Designer, who cannot be recognised by scientific experiment, the article concludes:

**“But evolution has produced many fantastical forms, from birds of paradise to stick insects to the blue whale, and ingenious designers should eventually be able to outdo nature.”**

‘But God has chosen the foolish things of the world to confound the wise.’ I Cor. 1:27.

### **8 September p30 – Ghost matter**

Following the finding of decay products of what is thought to be the Higgs particle, Nobel prizewinning physicist Jack Steinberger pointed out that still **“there are many unanswered questions that are extremely elusive at the moment”. Those questions include the nature of dark matter – the mysterious, invisible material thought to make up more than 80 per cent of the mass of the universe. Then there is dark energy, the stuff reckoned to be causing the universe’s expansion to accelerate. In what must rank as our worst prediction, particle physics overestimates dark energy’s magnitude by a factor of  $10^{120}$ . The standard model also cannot explain how matter survived the big bang [it should have been annihilated then by an equal amount of antimatter], or how gravity fits into the picture. It is riddled with so-called ‘free parameters’, troublingly arbitrary numbers that have to be fed into the theory by hand, for example to set the strength of the interactions it describes.”**

Because the Higgs hasn’t answered these questions, this cover article wonders

whether the key may lie with a different sort of particle: neutrinos. There are 3 sorts of neutrinos together with 3 corresponding kinds of antineutrinos, collectively known as leptons. There might be more than 3 of them, their masses are not known, and they can ‘shape-shift from one type into another. This is according to **“our best understanding of the building blocks of matter.”**

**“Many questions about neutrinos remain open ... what is needed are more and better experiments. This is one of the areas in which new discoveries are possible, but we don’t know from which direction these discoveries will come.”**

The problems of dark matter and energy, and of matter and antimatter at the beginning, are solved at a stroke by accepting that in the beginning God created the heavens and the earth. We also then have no need to postulate a multiverse, because our home was designed with man in mind – the anthropic creation.

**8 September p.40 – Unfathomable – The more we learn about the human genome, the less we seem to know about what all that DNA actually does. Linda Geddes reports on the major new findings released this week.**

**“After the genome was sequenced, another major project was launched to try to understand which bits of the genome do what. The results, released this week, reveal that our genome is far more complex and mysterious than biologists imagined just a decade ago.”**

Just 1.2 per cent of our DNA codes for protein. Some suggested that the rest was mostly junk. However, making RNA copies of genes – transcription – involves clusters of proteins binding to specific sequences near the genes. These proteins control the activity of genes by either

boosting or blocking transcription. The ‘junk’ sequences to which they bind are now known as regulatory DNA, or switches. This week, results of the study by teams worldwide found 4 million switch sites in 8.5 per cent of the genome, far more than expected. Nearly every part of the genome is near a switch. It is estimated that almost a fifth of the genome consists of vital switches. Moreover, individual switches interact with many genes, and most genes are being influenced by numerous switches at the same time. Far from being garbage left behind in a process of evolution from the proposed first living cell, what we have in every cell nucleus is an interacting network of instructions, switches and feedback mechanisms of incredible complexity that shouts design. **“Almost every gene we look at is physically touching other pieces of DNA, and it’s never just one, it tends to be five, eight, 10 sites, and each site in turn has RNAs on it, proteins on it, histones on it,” says team member Job Dekker of the University of Massachusetts.”**

The project estimates that up to 80 per cent of the genome is active, being involved in some kind of biochemical event daily. Much of it is transcribed into RNA. RNA can code for proteins or regulate gene activity while some RNA sequences act as taxi drivers to deliver proteins around the genome. They can tether one part of the genome to another, acting as a bridge.

Ewan Birney of the European Bioinformatics Institute in Cambridge, UK says: **“We don’t yet have a definitive answer to how much of it is important, but we’ve discovered a lot more things that could be important than anybody had ever suspected. People often say it’s the protein coding region, plus a bit more. It’s not a bit more, it’s a lot more ...Our genome knows how to make a**

**human, but I think it is hubris to think that that recipe book would be simple and well laid out. We are one of the most complicated things that we know about, and indeed it does look very complicated.”**

Tellingly, the *NS* editor (p.3) comments upon this article: **“But not so fast. It has yet to be shown that most of this activity is adaptive. In fact, there are still very good reasons for thinking that most of our DNA is far from essential.”**

I guess it all depends on your worldview.

### **15 September p.30 A brief history of the genome**

This 6-page cover story gives an evolutionary story of how the genome is thought by some evolutionists to have developed from nothing to us. It begins by quoting a 60 nucleotide long sequence that is common to all life (GTGCCAGC...) and claims it has survived for 3 billion years. Given today’s rate of mutation with each generation, we agree that this is **“unimaginable”!** **“You have around 100 mutations in your genome that are not present in your mother or father, ranging from one or two-letter changes to the loss or gain of huge chunks of DNA.”** About 3.5 billion years ago, LUCA – the Last Universal Common Ancestor – is thought to have evolved. It is said to have contained recipes for making RNAs and proteins. One wonders how simpler predecessors of LUCA survived without all this necessary kit. Then, **“around a billion years ago”,** oh my best beloved, **“a bacterium ended up inside an archaeon. Instead of one killing the other”** (immune systems hadn’t yet evolved), **“the two forged a symbiotic relationship, with the descendants of the bacterium gradually evolving to take on a crucial role: they became mitochondria, the power**



**factories inside cells that provide our energy.”** Without an immune system or a source of energy in the cells for the previous alleged 2.5 billion years, survival of the seriously unfit would have been miraculous.

**“The presence of introns [they used to call them junk sequences], and thus exons, in effect made genes modular. In an uninterrupted gene, mutations that add or remove sections usually change the way the rest of the gene is read, producing gibberish. Exons [coding for proteins], by contrast, can be moved around without disrupting the rest of the gene.”** That looks suspiciously like a design feature.

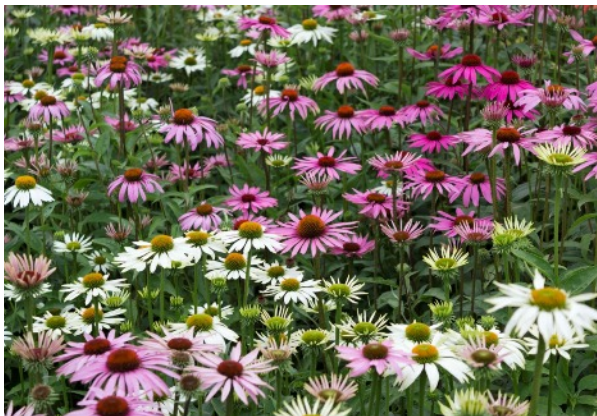
Eukaryotes, which have cells with an enclosed nucleus containing the genetic material, somehow evolved, and this is said to have given rise to organisms with many cells. Cells then started to differentiate, producing varied kinds of tissue for different uses – muscle, liver, limbs and brains. If you don’t think about it for too long, it seems credible.

Duplication of genes or even whole genomes permitted the extra genes to mutate into *Hox* genes, encouraging the evolution of vertebrates.

It seems we have **“an ancient parasite”** to thank for the **“mind-bogglingly complex”** human immune system.

Apparently the human brain evolved from the ape by way of thousands of small changes. The fact that the vast majority of mutations are harmful, lethal, or at best neutral, makes this idea hard to justify.

**“Along the way, there were uncountable failures, with trillions of animals dying often horrible deaths.”**



God made everything fully formed, with variation within limits, and pronounced it very good. Subsequently sin has spoiled this, but God has provided a Redeemer. Image: CSM.

The revealed truth is that God created everything fully formed, with the ability to produce varieties within genetic limits. He pronounced the whole creation ‘very good’. Sin came by one man, and death through sin, and so death passed upon all men, for that all have sinned. Then, in the fullness of time, the Father sent the Son to be the Saviour of the world. His death and resurrection was a sufficient sacrifice for our sin, so that a loving God could be both just and also the justifier of those who believe. Wow!

## **22 September p.36 – Truth decay**

The ‘facts’ of science have an expiry date.

**“In 1953, the prominent cell biologist Leo Sachs even said that ‘the diploid chromosome number of 48 in man can now be considered as an established fact.’”** It is now confidently asserted that there are 46 chromosomes in the human genome.

Science is about getting closer to the truth through observation and experiment. Some ideas have to be discarded. Eating meat has been good for you, then bad, then good, and now it’s a matter of opinion. I think

that at the moment red wine is good for you, in moderation of course. (the apostle Paul would agree.) A group of French scientists studied 500 articles from over 50 years on the subject of liver disease. They checked whether they were still regarded as factual, out of date or now disproved. They found a clear decay in the number of papers that were still factual. By measuring the time for half the articles to become redundant they obtained an average half-life of 45 years. **“Through this we can begin to get rough estimates of the half-lives of many fields. For example, a study of all the papers in the *Physical Review* journals, a cluster of periodicals of great importance to physicists, found that the half-life in physics is about 10 years.”**

**“Many medical schools inform their students that within five years, half of what they have been taught will be wrong – and the teachers don’t know which half it will be.”** Sometimes, we have to wait for the experts to pass away before their pet theories can be abandoned. It isn’t easy to acknowledge that what you have spent your career researching is a load of cobblers. If enough observations disagree with current theory, collapse can usher in a whole new paradigm, as once happened with combustion theory.

We await the overthrow of the theory of macro-evolution, and the general acceptance of the unchanging facts of biblical history. But don’t hold your breath. Science cannot study God.

### 29 September p.30 – The progress illusion

According to this piece, our ‘technological evolution’ has lacked steady progress. **“In fact, over the whole of human history, we have probably lost more**

**innovations than we now possess...”**

Some of these lost arts are cited. Also, it’s suggested, we made a very slow start because of Stone Age man’s **“limited cognitive abilities”**. It took, we are informed, two million years for these hunter gatherers to perfect the flint stone axe.

It is true that we have lost some ancient crafts, but then we started at a high point. Adam’s son Cain built a city for his many descendants during his long life. One of them, Jabal, raised cattle, while his brother Jubal played the harp and the organ. Their half-brother, Tubal-cain was an instructor of every artificer in brass and iron (Genesis 4). They had a cousin several times removed who was a master boat builder.

Flint axes would have been needed after the flood, in a harsh climate, before they were able to mine metal ores again. There never were primitive hominines chipping flint for 2 million years. Adam and Eve were made ‘at the beginning’ (Matthew 19:4-5). Further, they recorded their family histories for us.

### 29 September p.34 - Reality

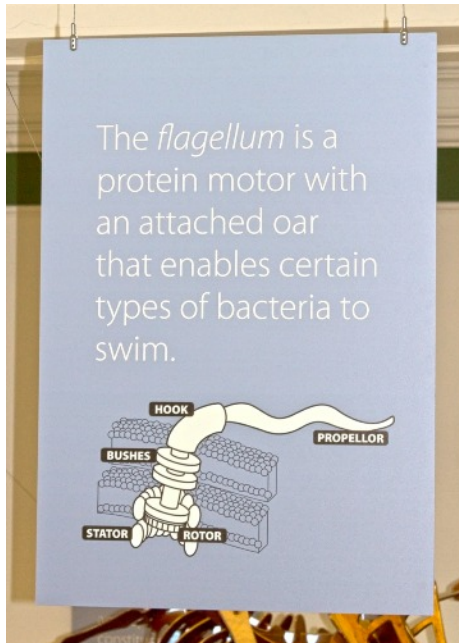
Over 14 pages, this article explores what we understand of the world around us. Science can describe a rock by its constituent atoms (a handful of different particles), plus some rules laid down by quantum mechanics. But electrons can behave as tiny particles or as a wave, and



Neolithic flint axe, about 31 cm long. Flint is hard to work with: shaping it requires considerable technical ability. Image: Dr. H. Krämer, Wikipedia, under Creative Commons Attribution-Share Alike 3.0 Unported licence.

change from one pattern to the other. Everything is reducible to fundamental particles that can act as waves. The ‘standard model’ describes the particles, but, for workers in this field it is unsatisfactory because it cannot describe dark energy and dark matter that are thought by them to comprise 96 per cent of the universe.

**“The universe is a computer, and everything that goes on in it can be explained in terms of information processing”** according to a *New Scientist* consultant. **“Quantum physics is almost phrased in terms of information processing... It’s suggestive that you will find information processing at the root of everything.”** The article does not conclude that since information processing is a mental exercise, we might find the mind of God at the root of everything.



The refurbished Genesis Expo includes, among many other things, a number of “soundbite” boards giving scientific information that supports Creation rather than Evolution. Image: CSM.

Perhaps, it is wondered, **“there actually is no reality independent of our observations. But if there is - how can we know?”**

The article concludes by hypothesising that some advanced alien civilisation may have produced a sort of computer simulation that we are part of! We might be their video game.

However, God’s Word offers this insight:- ‘We look not at the things which are seen, but at the things which are not seen: for the things which are seen are temporal; but the things which are not seen are eternal.’ II Cor. 4:18.

## Genesis Expo

We have all been very busy, and there are just a few things left to do before we throw open the doors again. Please check the CSM website soon for confirmation of the opening date.

There have been a lot of repairs necessary to this 19thC building, and we have spent a lot on new exhibits. Satisfying the new safety regulations, especially for fire and electrical devices, had become a necessity. Altogether this year we have spent over £41,000 on these one-off expenses. The Lord continues to keep us in the black financially without asking anyone for funds apart from membership subscription (kept at £10 since 2008). Thank you for your generosity to His work.

We are celebrating the 80th year of the Movement (1932-2012) with a day conference at the Royal Maritime Club, just round the corner from the Genesis Expo, on 3rd November. Those coming will hear four presentations plus a Q&A

session from the floor, and then visit the newly refurbished exhibition. There are still places available.

Please continue to pray for the creationist cause in the UK. John Mackay is currently on an extended tour here.

## Malcolm Bowden

We are delighted to announce that Malcolm Bowden has accepted an invitation to become a Vice-President of CSM. Malcolm joined the CSM council in 1976 and has written, lectured and debated for us on numerous occasions. He is also the author of three excellent creationist books stocked by CSM - *Science versus Evolution*, *The Rise of the Evolution Fraud* and *True Science Agrees with the Bible*.

## Quotes

“Requiring students to leave their religion at the door of the science class is denying them a proven tool of systematic enquiry.”  
Steve Fuller, *Dissent over Descent*

“Since the flagellum is so well designed and beautifully constructed by an ordered

assembly pathway, even I, who am not a creationist, get an awe-inspiring feeling from its ‘divine’ beauty. However, if the flagellum has evolved from a primitive form, where are the remnants of its ancestor? Why don't we see any intermediate or simpler forms of flagella than what they are today? How was it possible that the flagella have evolved without leaving traces in history?”

Shin-Ichi Aizawa, in an essay, *What is essential for flagellar assembly?*

Articles in the Journal are generally by the editor, R. Cambridge, unless otherwise stated. Articles, letters, notes and other contributions from new writers are warmly welcome.



Scan the QR code above with your mobile phone to go direct to the CSM website.

# Creation Science Movement

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